

## **EUTROPHICATION**

## **OSPAR's QUALITY STATUS REPORT 2023 BRIEFING NOTE SERIES**

Nutrients, especially nitrogen and phosphorus, are essential for the growth of the aquatic plants that form the basis of marine food webs. Natural processes regulate the balance between nutrient availability and the growth of marine plants and animals in ecosystems.

Excess nutrients introduced into the sea by human activities can disturb this balance, resulting in accelerated algal growth. This leads to adverse effects on water quality and marine ecology such as algal blooms, increased turbidity and eventually hypoxia, potentially causing fish and shellfish mortality. This process is known as eutrophication. Eutrophication harms water quality regulation and acts as a stressor on other ecosystem components. OSPAR works under its NorthEast Atlantic Environment Strategy (NEAES) 2030 to tackle eutrophication and to achieve a healthy marine environment.

The eutrophication assessment describes the fourth application of the OSPAR Common Procedure for the assessment of eutrophication, which was conducted for the period 2015-2020. It identifies areas with eutrophication problems and where remediation measures are needed. Eutrophic areas were identified along the continental coasts from France to Denmark/ Sweden and in river plumes of the Greater North Sea and the Bay of Biscay. Reanalysis of the previous three assessments shows a gradual improvement since 2000. However, the OSPAR 2010 objective "to combat eutrophication, with the ultimate aim of achieving and maintaining a healthy marine environment where anthropogenic eutrophication does not occur" has not yet been fully achieved.



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